WORKING PAPER: 3402-01-01 September 1985 (rev.)

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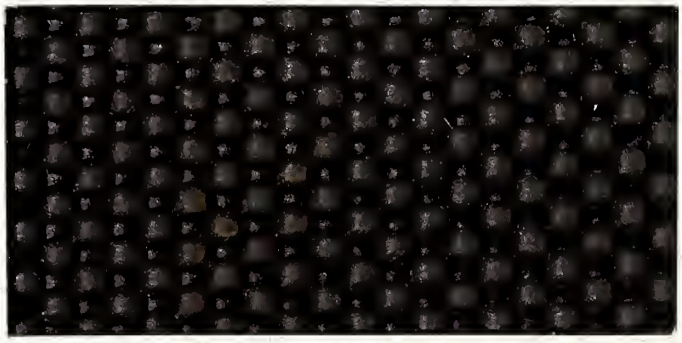

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3402-01-01 September 1985 (rev.)

A Decomposition of Medicare Part B Payments for Physicians' Services

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Support for this research was provided by Health Care Financing Administration Grant No. 18-C-98326/1-01 to the Brandeis University Health Policy Research Consortium. Opinions are those of the authors and not necessarily those of The Urban Institute or the Health Care Financing Administration.

The authors wish to thank John Holahan for review and comment on an earlier draft, Chris Koller and Marsha Silverberg for research assistance, and Joan Sanders and Barbara Willis for skillful and patient typing. We especially wish to thank Joyce Mann for her efforts in obtaining and documenting the unpublished data for this study.

A DECOMPOSITION OF MEDICARE PART-B PAYMENTS FOR PHYSICIANS' SERVICES

ABSTRACT

Total federal payments for services covered by Medicare's Part B Supplementary Medical Insurance Program rapidly increased between 1975 and 1983. Among the fastest growing Part B expenditures were payments for the services of highly specialized physicians, and for medical equipment and tests. Four factors contributed to that growth. The two most important were: general price inflation, and increases in service utilization per enrollee. Conversely, growth in program enrollments and in inflation-adjusted payments per service were less important: however, the relative contribution of each factor to increases in Part B expenditures varied with the type of service and the specialty of the provider. These findings suggest that restraining future increases in Part B expenditures may require policies that restrain service volume as well as payments per unit.

Introduction

The federal deficit, and how to reduce it to tolerable levels, is one of the major policy issues facing the country. To date, federal fiscal policies have not been successful in that regard, and the prospects are slim that growth of the economy or tax reform will yield new tax revenues sufficient to solve the problem. Instead, deficit reduction will likely require additional cuts in federal spending, quite possibly in the budgets of some of the largest and most popular domestic programs. One which Congress is currently examining closely is Medicare's Supplementary Medical Insurance Program--Medicare Part B. That program provides coverage against the costs of medical services ranging from outpatient to laboratory services, but nearly three quarters of its outlays are for physicians' care. Part B program reimbursements reached $20 billion in fiscal year 1985, making it the third largest federal domestic spending program trailing only Social Security and Medicare's Part A Hospital Insurance Program.* Furthermore, the Congressional Budget Office projects those payments to increase at an annual rate of 13.5 percent through fiscal year 1990.**

Constraining or reducing the rate of increase in the Part B budget while maintaining enrollee's access to medical care at acceptable levels will be a formidable task. Doing so requires an understanding of the forces causing those increases. This study facilitates that understanding by identifying trends in Part B program payments and the factors which determine them:

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*Budget of the United States Government: FY 1985, Appendix, U.S. Government Printing Office, Washington, D.C., 1985.

**Committee on Ways and Means U.S. House of Representatives, Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means 99th Congress 1st Session, Committee print WMCP: 99-2, (1985) p. 140.

increases in payments per service; in services per enrollee; and in enrollment. By assessing each factor's contribution to the overall rate of increase in program outlays, the study provides insights into the merits and limitations of price controls and other policy options for constraining growth in the federal Part B budget.

Background

Since its implementation in 1965, the Medicare Part B program has protected the nation's elderly and, later, certain non-elderly disabled against much of the costs of obtaining mainstream medical care, especially physicians' services. Enrollment in the program is voluntary and requires payment of monthly premiums; $15.50 in 1985. Those premiums account for about 25 percent of the program's annual income; federal general revenues account for the remaining 75 percent.*

To help assure enrollees' access to medical care, the program's architects designed its reimbursement system to pay reasonable prices for covered services on a fee-for-service basis. The reasonable fee for each service is the lesser of the billed charge, the physicians' customary charge (median bill for the service in the preceding calendar year), or the prevailing fee in the region (75th percentile of local customary fees constrained by a Medicare Economic Index of growth in practice costs). Beneficiaries are liable for the initial $75 in expenses, and for coinsurance equal to 20 percent of the reasonable charge beyond the initial deductible. Furthermore, if the physician refuses to accept the reasonable fee as payment-in-full (refuses assignment of benefits), the beneficiary is liable for the difference between the billed and reasonable

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*1985 Annual Report of the Board of Trustees of the Federal Supplemental Medical Insurance Trust Fund, Washington, D.C., March 28, 1985.

charges. In all cases, the Part B program reimburses the beneficiary or assignee 80 percent of the reasonable charge less deductibles. Prior to July 1984, customary and prevailing charge screens were updated annually. But the Deficit Reduction Act of 1984 froze Medicare physicians' fees for a period of 15 months, a temporary cost containment strategy in anticipation of more fundamental Medicare reform. That same legislation implemented the Participating Physician Program wherein participants agree to accept assignment on all services in return for possibly greater rates of increases in customary fee screens following the freeze.

Data

Annually since 1975, the Health Care Financing Administration (HCFA) has drawn a five percent national sample of Part B claims representing all covered services except those provided by hospital-based physicians.* The study analyzes two series of unpublished HCFA tabular data derived from those samples. The first is based on claims generated by elderly enrollees: it reports annual total program reimbursements and service frequencies provided by physicians in different specialties between 1975 and 1982.** The second series reports total program reasonable charges and frequencies by types of services from all sampled claims in two years; 1975 and 1983.*** Supplementing those are additional HCFA data on annual Part B enrollment.

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*For details see: Medicare Statistical File Manual, U.S. Department of Health and Human Services, Health Care Financing Administration, Division of Data Standards and Quality. September 1983.

**BSPR 11-A series "Services, Charges, and Reimbursements for Aged Beneficiaries by Specialty Code Distributed by Type of Assignment," expense years 1975-1982.

***Series SRQ-6: because of inaccuracies in the series in some intervening years, the study restricts analysis to calendar years 1975 and 1983.

Growth in Program Payments: by Provider Specialty

An examination of trends in Part B payments by providers' specialty suggests that a shift may have occurred in the style of medical care received by elderly enrollees. Between 1975 and 1982, program payments for their care increased at an annual rate of nearly 20 percent. but the rate of increase in payments to primary care providers was well below the rate for payments to many specialists and supplies. Specifically, Part B reimbursements for services by general and family practitioners increased at approximately 12 percent per year, while payments for services of cardiologists, ophthalmologists, radiologists, and suppliers of medical equipment increased much more rapidly--between 24 and 28 percent annually (table 1.0). Payments for the services of other medical and surgical specialists increased less rapidly; annual growth in the range of 15 to 22 percent. But even those rates were well above the growth in payments to general and family practitioners. While far from conclusive, these patterns suggest that the Part B program has supported an increasingly specialized and technologically oriented style of care.

Growth in Reasonable Charges: by Type and Location of Service

An analysis of trends in total Part B reasonable charges for different types of services yields additional information on changes in patterns of care. For example, total reasonable charges for all types of care grew at an annual rate of approximately 19 percent between 1975 and 1983 (table 2.0). But total reasonable charges for medical care increased at a slower annual rate--less than 17 percent. In contrast, total reasonable charges for other medical services, essentially equipment and supplies, grew by more than 26 percent per year. And aggregate reasonable charges for consultations, diagnostic radiology, and laboratory services grew at annual rates exceeding 20

Table 1.0

Medicare Supplementary Medical Insurance Program
- Program Payments to Physicians and Suppliers
for Services to Aged in U.S. -

	1975		1982		Annual Percent Increase 1975-82
	$Millions	Percent	$Millions	Percent	
All Providers	$2,860	(100%)	$9,980	(100%)	19.5%
Internal Medicine	538	(19)	1,712	(17)	18.0
Family and Genral Practice	401	(14)	907	(9)	12.4
General Surgery	315	(11)	864	(9)	15.5
Ophthalmology	176	(6)	888	(9)	26.0
Clinic	156	(6)	530	(5)	19.1
Radiology	156	(6)	687	(7)	23.6
Orthopedic Surgery	153	(5)	511	(5)	18.8
Urology	143	(5)	393	(4)	15.5
Anesthesiology	118	(4)	433	(4)	20.4
Cardiovascular Disease	74	(3)	413	(4)	27.8
Other Specialties	435	(15)	1,740	(17)	21.9
Suppliers	194	(7)	902	(9)	24.6

Source: Unpublished HCFA BSPR-11 tables based on 5 percent sample of bill summary records: aged beneficiaries only.

Table 2.0

Medicare Supplementary Medical Insurance Program
- Reasonable Charges by Type of Service in U.S. -

	1975		1983		Annual Percent Increase 1975-83
	$Millions	Percent	$Millions	Percent	
All Types	$4,481	(100%)	$18,109	(100%)	19.1%
Medical Care	1,822	(41)	6,164	(34)	16.5
Surgery	1,350	(30)	5,474	(30)	19.1
Other Medical Services*	253	(6)	1,649	(9)	26.4
Clinical Lab	362	(8)	1,575	(9)	20.2
Diagnostic X-ray	296	(7)	1,393	(8)	21.4
Anesthesia	181	(4)	749	(4)	19.4
Consultation	114	(3)	571	(3)	22.3
All Others	103	(2)	532	(3)	22.8

Source: Unpublished HCFA SRQ-6 Tables based on 5 percent sample of bill summary records.

*Includes: rental, purchase, or repair of durable medical equipment; internal and external prosthetic devices and appliances; supplies; and ambulance services.

percent. These findings are further evidence of the relative decline in importance of primary medical care in the Part B budget, and the concomitant rise in importance of other forms of care, and the technology complementing it.

Finally, there is evidence that the hospital outpatient department is becoming an increasingly important site of care for Part B enrollees. Between 1980 and 1983, reasonable charges for care in outpatient settings and in the home increased dramatically; by nearly 40 percent per year (table 3.0). Although the fraction of total program reasonable charge attributable to care in these two sites is small, approximately 5 percent in outpatient departments and 4 percent in the home, their rapid rate of growth is noteworthy. Analysis of HCFA data not reported here suggests that a major contributor to the growth in reasonable charges for outpatient care is growth in surgery and related services (anesthesia, assistance at surgery, diagnostic radiology), performed in that setting.*

A Decomposition Model of Program Payments

The design of effective policies for constraining future growth in the Part B budget requires more than knowledge of the trends in program outlays and charges; it requires information on the factors responsible for them. A simple decomposition model of those trends provides that information. By definition, total Part B program payments in any year are the product of total service volume and average price per unit. Those two components, in turn, are the product of four factors: program enrollment (n); services per enrollee (q); general inflation (r); and real (inflation-adjusted) reimbursements per service (p). For reasons of simplicity and analytic tractability, the study

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*HCFA unpublished SRQ-6 tables 1975 and 1983.

Table 3.0

Medicare Supplementary Medical Insurance Program
- Reasonable Charges by Location of Service in U.S. -

	1980		1983		Annual Growth Rate 1980-83
	$Millions	Percent	$Millions	Percent	
All Places	$9,758	(100%)	$18,119	(110%)	20.6%
Inpatient Hospital	5,503	(56)	9,884	(55)	19.5
Office	2,806	(29)	4,931	(27)	18.8
Outpatient Hospital	348	(4)	948	(5)	33.4
Home	261	(3)	701	(4)	33.0
Other	840	(9)	1,646	(9)	22.4

Source: HCFA SRQ-6 tables based on annual 5 percent sample of bill summary records.

adopts an exponential or continuous growth model of total program payments. In that model, program reimbursements (Y_t) in a given year are:

$$Y_t = a_y e^{b_y t}$$

where a_y is the base year reimbursement level, b_y is the rate of continuous annual growth in reimbursements, and t is time in year. The complete expression for program reimbursement is the product of the four components:

$$Y_t = a_y e^{b_y t} = a_r e^{b_r t} * a_p e^{b_p t} * a_q e^{b_q t} * a_n e^{b_n t}$$

$$= (a_r * a_p * a_q * a_n) e^{(b_r + b_p\, b_q + b_n)t}$$

The continuous rate of growth in total payments (b_y) is the sum of the rates of growth in a general price index (b_r), in real reimbursements per service (b_p), in utilization per enrollee (b_q) and in enrollment (b_n). Further, the ratio of each to the rate of growth in total reimbursements (b_y) is a measure of each factor's percentage contribution to the latter.

Given annual data on the level of the constituent variables, it is straightforward to estimated the associated growth rate using ordinary least squares regressions. for example, given annual HCFA data on total Part B reimbursements for a particular specialty (Y_t), the estimated annual rate of growth (b_y) is obtained from least squares regression estimation of the log-linear equation:

$$\ln Y_t = \ln (a_y) + b_y t$$

Analogous equations with general price indexes, real reimbursements per service, utilization, and enrollment as dependent variables yields estimates of their rates of growth.

The analytic advantage of the exponential growth model is the additive relationship between the rates of increase of total reimbursements and its constituent factors. Since growth is a continuous rather than a discrete process in the exponential model, those rates will be somewhat smaller than their analogs in a discrete growth model.* Hence, growth rates reported in this section are somewhat smaller than those in previous tables.

Decomposition of Program Payments by Specialty: Results

Between 1975 and 1982, Part B reimbursements for services to elderly enrollees grew at an 18 percent continuous annual rate (table 4.0). Consistent with findings in previous tables, reimbursements for services provided by generalists (family and general practitioners and general surgeons) increased at a slower than average rate; between 12 and 14 percent annually. On the other hand reimbursements for care provided by some of the more specialized physicians (ophthalmologists, cardiologists, and radiologists) grew much more rapidly; between 22 and 26 percent annually.

But what were the causes of such increases, and why did payments for the services of some specialists increase faster than others? At least part of the explanation is differences in growth rates of the determining factors; especially real prices and utilization per enrollee. Assessing each factor's contribution is facilitated by expressing its growth rate as a percentage of

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*For a discussion of continuous and discrete growth models see: Alpha C. Chiang, Fundamental Methods of Mathematical Economics, 2nd edition, McGraw Hill, New York 1974, pp. 292-293.

Table 4.0

Annual Rates of Growth in Determinants of
Medicare Part B Program Payments: by Specialty
(OLS Regression Coefficients)
1975-82

	Total All Specialties	General & Family Practice	Internal Medicine	General Surgery	Ophthal-mology	Ortho-pedic Surgery	Urology	Cardio-vascular Disease	Radiology
Total Payments	18.0%	12.2%	16.6%	14.0%	22.5%	17.1%	14.2%	25.6%	22.0%
Enrollment	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Services Per Enrollee	6.0	-0.0*	4.6	-01.3*	07.6	05.0	03.3	10.8	10.5
Real Payments Per Service	2.3	2.5	2.3	5.7	5.2	2.4	1.2*	5.1	1.8
General Inflation**	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4

*All regression coefficients are significant at .01 level except the rates of growth of services per enrollee for General and Family Practitioners and General Surgeons, and of real payments per service for Urologists.

**As measured by the GNP Implicit Price Deflator.

the rate of increase in total program reimbursements. For example, the 2.3 percent annual growth in elderly enrollments represents 12.5 percent of the rate of increase in associated Part B reimbursements over the study interval (table 4.1). Furthermore, growth in utilization per enrollee represents 33.6 percent of the increase in reimbursements; real payments per service represents 12.6 percent; and general inflation represents 41.3 percent.

General inflation was the greatest contribution to the rate of increase in total program reimbursements for all services. And it also explains a substantial fraction of the rates of increase in reimbursements for the services of physicians in particular specialties; between 29 and 61 percent depending on specialty (table 4.1). After inflation, utilization per enrollee emerges as the most important determinant of growth in total program reimbursements. Furthermore, it is the primary determinant of the fastest growing classes of payments; explaining between 34 and 48 percent of the growth in payments for care rendered by the ophthalmologists, cardiologists, and radiologists. But utilization was not a dominant contribution to the rates of increase in payments to all specialties. In particular, there was essentially no change during the study interval in per-enrollee utilization of care by general and family practitioners and by general surgeons. Consequently, all the growth in reimbursements for their services is attributable to other factors--general inflation, increases in real payments per service, and program enrollments. Real growth in payments per service explains much (37 percent) of the increases in reimbursements for general surgeons' services, and approximately 20 percent of the increases for care by general and family practitioners, ophthalmologists, and cardiologists.

Table 4.1

Decomposition of Annual Rates of Continuous Growth in of
Medicare Part B Program Payments: by Specialty
1975-82

	Total All Specialties	General & Family Practice	Internal Medicine	General Surgery	Ophthal-mology	Ortho-pedic Surgery	Urology	Cardio-vascular Disease	Radiology
Total Payments	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Enrollment	12.5	18.4	13.5	14.7	10.0	13.2	15.8	8.8	10.2
Services Per Enrollee	33.6	00.0	27.9	00.0	33.8	29.5	23.4	42.2	47.8
Real Payments Per Service	12.6	20.7	14.0	37.0	23.2	13.9	8.6	20.0	8.3
General Inflation**	41.3	60.8	44.6	48.4	33.0	43.4	52.2	29.0	33.7

*As measured by the GNP Implicit Price Deflator.

Finally, increases in program enrollment emerge as one of the least important factors. The 2 percent average annual growth in elderly enrollments over the study period accounts for between 9 and 18 percent of the increases in total program reimbursements by specialty. While not trivial, that is less than the contribution of other factors.

Decomposing Trends in Aggregate Reasonable Charges: By Type of Service

An analysis of the growth in total Part B reasonable charges for different types of services complements the analysis of growth in payments by specialty. As before, the study adopts an exponential growth model of total reasonable charges and their determinants. Consequently, annual rates of increase in total reasonable charges will be identical to the sum of the rates of growth of each determining factor. And the annual exponential growth in total reasonable charges will be somewhat smaller than the analogous rates of discrete growth reported in preceding tables. Since only two years of data are available, the study employs a simple algebraic technique rather than least squares regression to estimate growth rate between 1975 and 1983. Specifically, the estimated annual rates of increase are defined as:

$$(\ln Y_t - \ln Y_o)/t$$

where Y_o and Y_t are the values of a factor at the beginning and end of the study period, and t is the length of the period in years.

There is somewhat less variability in the estimated rates of increase in reasonable charges by type of service (table 5.0) than was true of growth in program payments by specialty. Annual increases in reasonable charges ranged between 15 percent (medical care) and 24 percent (other medical services; primarily equipment and supplies). The most important determinants of that

Table 5.0

Annual Rates of Continuous Growth in Determinants of Medicare Part B Reasonable Charges: by Type of Service
1975-83

	All Types	Medical Care	Surgery	Other Medical Services	Clinical Lab	Diagnostic X-ray	Consultation
Total Reasonable Payments	17.4%	15.1%	17.5%	23.5%	18.4	19.4%	20.1%
Enrollment	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Services per Enrollee	6.8	3.4	6.9	16.2	7.8	8.6	8.9
Real Charges per Service	1.6	2.8	1.6	-1.8	1.6	1.7	2.2
General Inflation	6.7	6.7	6.7	6.7	6.7	6.7	6.7

growth are utilization of services per enrollee and general, economy-wide inflation. In fact, increases in utilization explain nearly 40 percent of that growth for all types of care (table 5.1). Furthermore, increases in utilization per enrollee explains approximately 23 percent of of the growth in reasonable charges for medical care, nearly 70 percent in the case of other medical services, and between 40 and 45 percent for the remaining types of service.

Over the study period, general price inflation averaged nearly 7 percent annually, and accounted for almost 39 percent of the overall rate of growth in total reasonable charges for all covered services. And it explains between 29 percent (other medical services) and 44 percent (medical care) of the growth in total reasonable charges for services in each type category. The remaining two factors are less important: growth in real reasonable charges per service and in enrollment explain 9 percent and 13 percent, respectively, of the rate of increase in reasonable charges for all services. Only for medical services are real increases in reasonable charge per service as important an explanatory factor as growth in utilization. However, services in that category account for over one third of total Part B reasonable charges. Furthermore, it is interesting to note that real reasonable charges per service for equipment and supplies (other medical services) <u>decreased</u> by nearly two percent annually over the study period. The data do not permit detailed study of that reduction, so alternative explanations for it (e.g. changes in the mix of "other" services, increased efficiency in production) cannot be investigated. Finally, program enrollment explained approximately 13 percent of the increase in total reasonable charges for all services, and its contribution to growth in outlays for specific service types ranged from 9.8 percent (other medical services) to 15.2 percent (medical care).

Table 5.1

Decompositon of Annual Rates of Continuous Growth in of Medicare Part B
Medicare Part B Reasonable Charges: by Type of Service
1975-83

	All Types	Medical Care	Surgery	Other Medical Services	Clinical Lab	Diagnostic X-ray	Consultation
Total Reasonable Payments	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Enrollment	13.2	15.2	13.1	9.8	12.5	11.9	11.4
Services per Enrollee	39.1	22.5	39.4	68.9	42.4	44.3	44.3
Real Charges per Service	9.2	18.5	9.1	-7.7	8.7	8.8	10.9
General Inflation	38.8	44.4	38.3	28.5	36.4	34.5	33.3

Summary and Conclusions

This study analyzed trends in Medicare Part B program payments between 1975 and 1982, and trends in total reasonable charges for covered services between 1975 and 1983. It also estimated the contributions to those trends of four determinants: program enrollment; utilization of services per enrollee; general inflation; and real payments (and reasonable charges) per service. The trend analyses suggest there has been an increase in the intensity and specialization of the care received by Medicare Part B enrollees. That follows from observed increases in the fraction of total program reimbursements and reasonable charges for the services of specialized physicians (ophthalmologists, cardiologists, radiologists), on medical equipment and supplies, and on tests and consultations. Concurrently, the fraction of total Part B outlays for the services of general and family practitioners and medical care services has declined. Furthermore, estimated outlays for services in hospital outpatient departments (and in the home) increased at a faster than average rate; a phenomenon partly attributable to the rapid increase in reasonable charges for outpatient surgical services.

Almost three quarters of the rates of growth in total program payments and total reasonable charges over the study interval are attributable to two factors: general price inflation and growth in utilization of services per enrollee. But the relative importance of those factors varied with provider specialty and type of service. General inflation explained well over half of the increase in program payments for the services of general and family practitioners, and was the primary factor driving the increases in program payments for medical care services.

Growth in services per enrollee was a major determinant of the increases in program payments for care by some of the most specialized providers: cardiologists and radiologists. And it was the most important factor in the rapid growth in program outlays on services complementary to physicians' time: medical equipment and supplies, laboratory services, and diagnostic radiology. Conversely, the relatively constant rate of utilization of general and family practitioners' and general surgeons' services over the study interval helped to constrain the associated rates of increase in program outlays.

The other two factors--enrollment and real outlays per service--were often less important determinants of increases in Part B payments. However, increases in real outlays per service were an important cause of the growth in total program reimbursements for services of general and family practitioners, for medical care procedures, and the services of general surgeons. It also explained about one fifth of the rate of increase in reimbursements for the services of ophthalmologists and cardiologists.

These results have several implications for Medicare payment reforms. First, as general inflation was one of the major factors behind the growth in Part B program expenditures during the latter half of the 1970s, a resurgence of inflation could seriously jeopardize federal efforts to restrain future increases in Part B costs. A related observation is that fee freezes--like the one currently in place--are likely to be most effective as a cost containment strategy during a period of rapid general inflation. But physicians might be less willing to participate in Medicare (i.e. accept assignment) under a fee freeze if prices of other goods and services are increasing rapidly. Second, price controls alone might not be successful as cost containment strategy; especially when growth in utilization per enrollee

is an important cause of the growth in program outlays--as was true of payments for ophthalmologists' and cardiologists' services during the study period. Third, restraining the federal contribution to the the Part B program through controls on utilization may force policy makers into making explicit tradeoff between cost-containment and enrollees' access to care. Although increases in utilization were an important determinant of the increases in federal Part B obligation duringt he late 1970s, attempts to restrain future growth in those obligations via tighter utilization controls might be challenged by some as tantamount to restraining access. Finally, the study's findings suggest a series of important and unanswered questions. For example, what caused the rapid increases in enrollees' utilization of services? What are the consequences of an aging elderly population for Medicare Part B payments per enrollee and in total? What role has the development of new medical procedures, devices, and technologies played in the growth in average utilization rates? Answers to these and other questions will increase policy makers' understanding of the Part B program, and will increase the likelihood that cost containment can be achieved with minimum loss of enrollees' access to mainstream medical care.

APPENDIX

Date Base: Reporting Problems

The unpublished BSPR series 11-A and SRQ-6 data underlying this study are derived from HCFA's Part-B bill summary record file. That file is constructed from 5 percent samples of beneficiaries' claims provided annually by Part-B carriers nationwide. Unfortunately, those data have been found to be of uneven accuracy and reliability over time and across carriers. However, there is no single, authoritative source of information on the magnitude or extent of reporting, coding, or other errors associated with the unpublished data series or the primary bill summary record data. Rather, one must sift through internal HCFA memoranda, notes, publications, and informal sources to cover the scope of possible problems with these data.

It is not within the scope of this study to develop a definitive critique of the 5 percent bill summary record file or to develop a systematic and exhaustive survey of all errors or anomalies uncovered by disparate users of those and related data. However, there are some problems and limitations which are sufficiently generic to warrant discussion herein.

The primary problem is the apparently greater reliability of the 1975, 1976, and post 1980 data in contrast to the intervening years. for whatever reason there are some documented instances of non-reported and inaccurate data from some carriers in the 1977 to 1979 interval. by implication, analysis of sequential year to year changes in Part-B payments based on such data would be questionable. However, the essentially inconsistent nature of the reporting errors, and the fact that they are associated with only a few carriers' data in any year means that the nationwide aggregate <u>trends</u> in the data are more

reliable than the year to year changes. In fact, regression analysis of the presumed reliable HCFA actuarial data on Part-B disbursements for physicians services between calendar year 1975 and 1982 revealed a continuous annual growth rate of 17.6 percent. That contrasts favorably with the 18.0 percent annual growth in total payments estimated in this report using bill summary system data. Furthermore, other analysts have documented the relative reliability of the 1975 data by comparing it to HCFA payment records.* Therefore, there is less reason to be distrustful of analyses based on data from 1975 and 1983 than on data from some other pairs of years.

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*Pine, P., M. Gornick, J. Lubitz, and N. Newton. "Analysis of Services Received Under Medicare by Specialty of Physician," Health Care Financing Review, September 1981, pp. 89-116. These authors report the results of region by region comparisons of average program payments per enrollee based on bill summary data and on data from the payment record system in 1975. For the nation overall and for each of the five major census regions, estimated payments per enrollee from the first data source were with ten percent of the value computed from payment record data.

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